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(54) **Catalyst support and catalyst and process for producing the same from a water in oil type emulsion**

(57) A catalyst support, a catalyst using the catalyst support and a process for producing the same are disclosed. For instance, the catalyst support includes a composite oxide powder produced by spraying and burning a W/O type emulsion, the W/O type emulsion including an aqueous solution dispersed in an organic solvent, the aqueous solution containing aluminum as a major component and at least one co-metallic element in addition to the aluminum. Thus, the catalyst support can be produced less expensively without using any expensive alkoxide. Further, due to the spraying and burn-

ing, the composite oxide powder is composed of porous hollow particles which have a very thin shell thickness of dozens of nanometers, and makes the catalyst support which is amorphous and exhibits a large specific surface area. Hence, the catalyst support can maintain the large specific surface area even after a high-temperature durability test. Furthermore, the composite oxide powder includes the co-metallic element which is composited in such a highly dispersed manner that the agglomerated sulfates are less likely to be produced. Therefore, the catalyst support is inhibited from being poisoned by sulfur.



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EUROPEAN SEARCH REPORT

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
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			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			B01J B01D
The present search report has been drawn up for all claims			
Place of search <b>MUNICH</b>		Date of completion of the search <b>23 February 2000</b>	Examiner <b>Schwaller, J-M</b>
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
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